

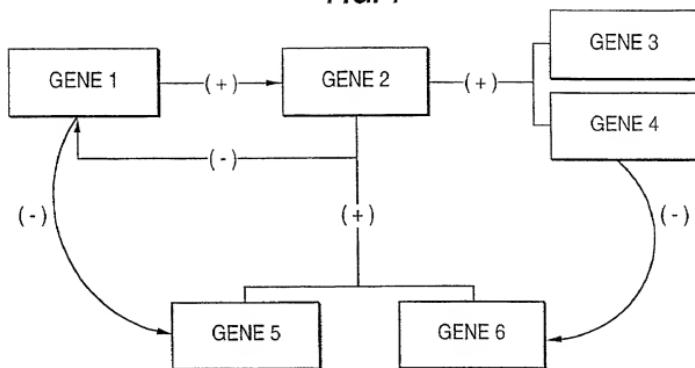
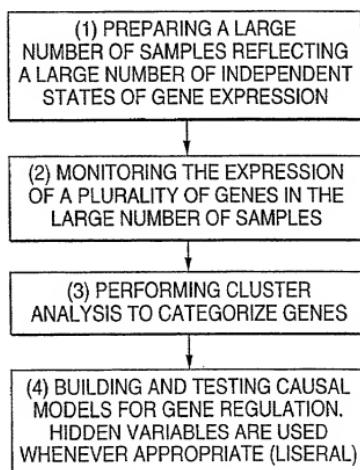
**FIG. 1****FIG. 2**

FIG. 3

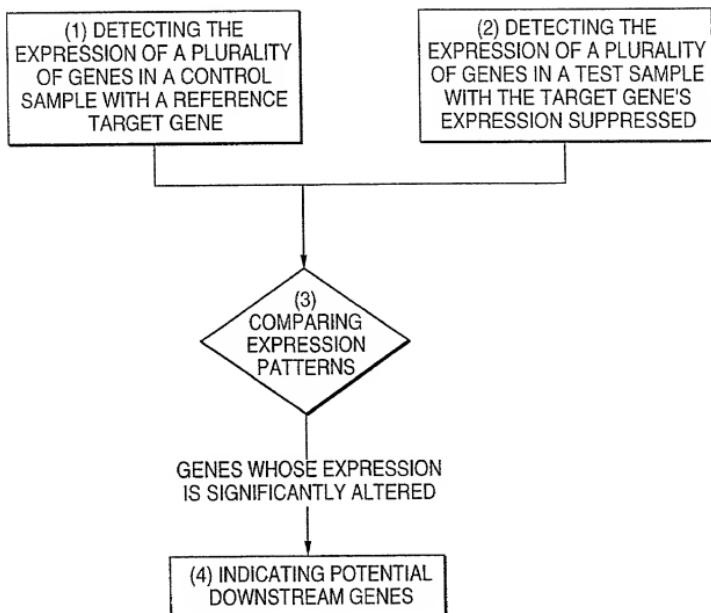
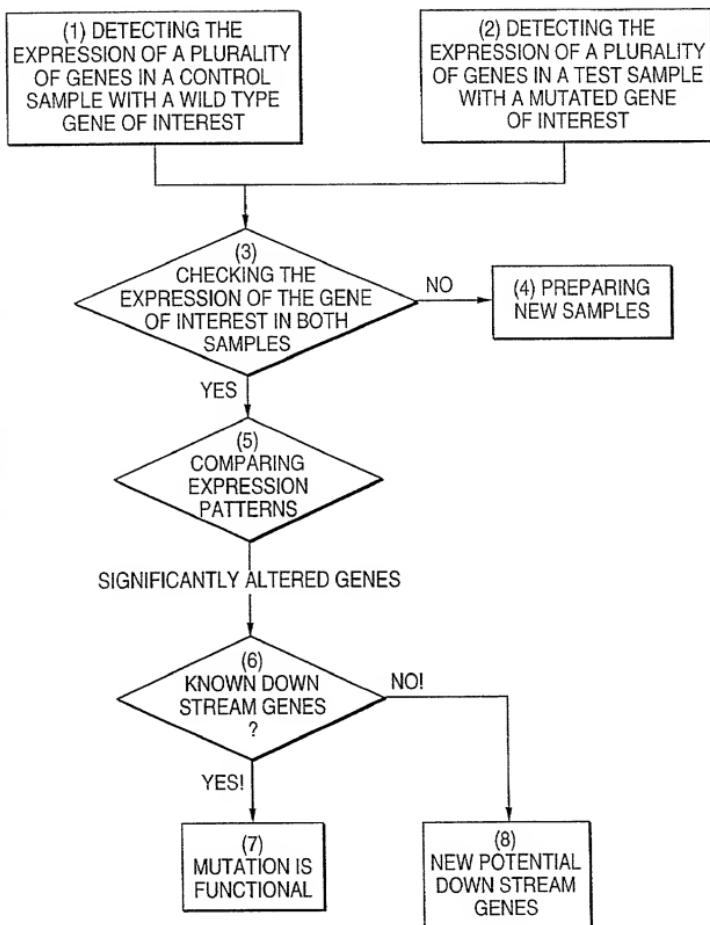
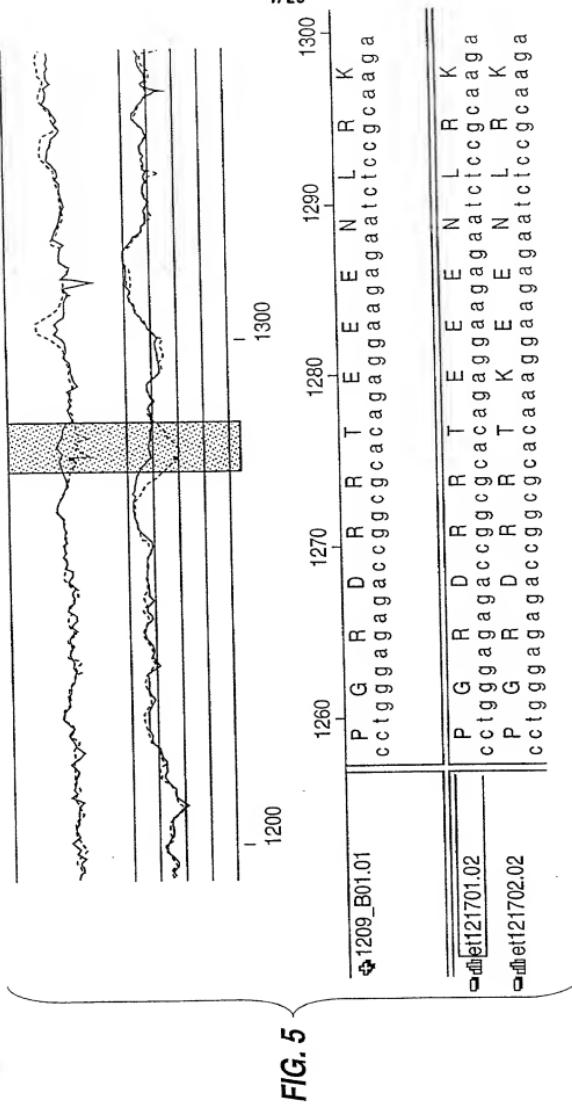


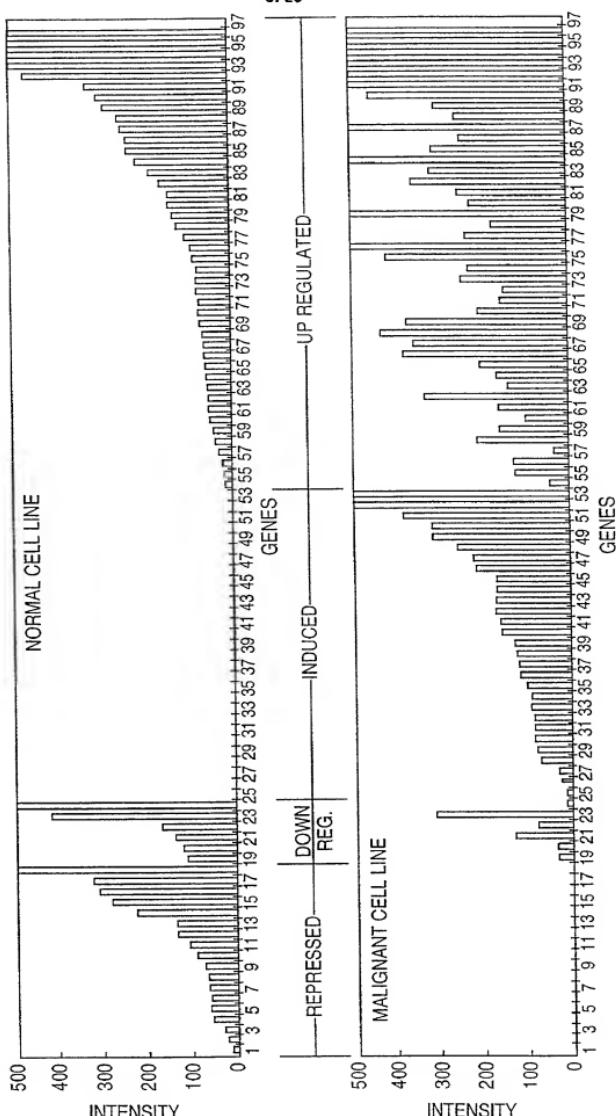
FIG. 4



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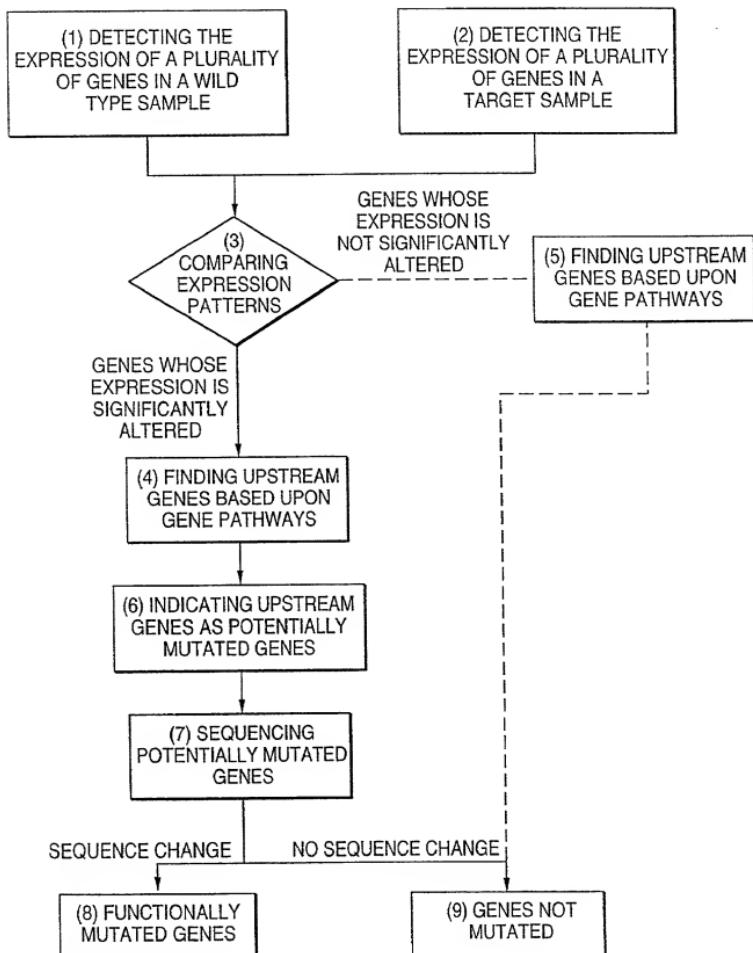


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**FIG. 6**

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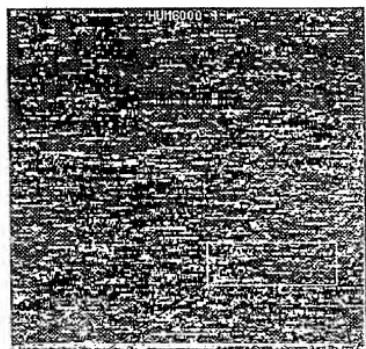
FIG. 7



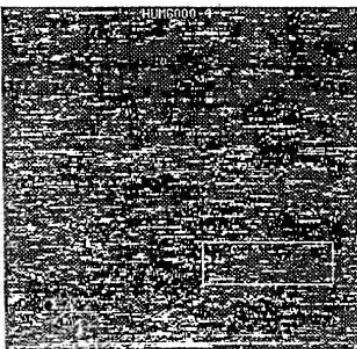
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FIG. 8

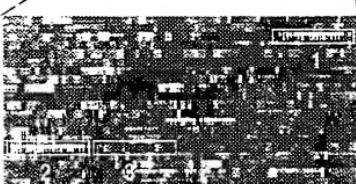
HT-125



BT-474



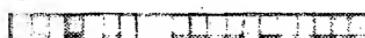
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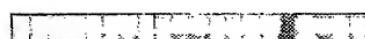
1 HT-125



2 HER2/NEU



3 LAMININ RECEPTOR

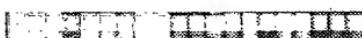


GALECTIN-1

BT-474



HER2/NEU



LAMININ RECEPTOR



GALECTIN-1

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FIG. 9A

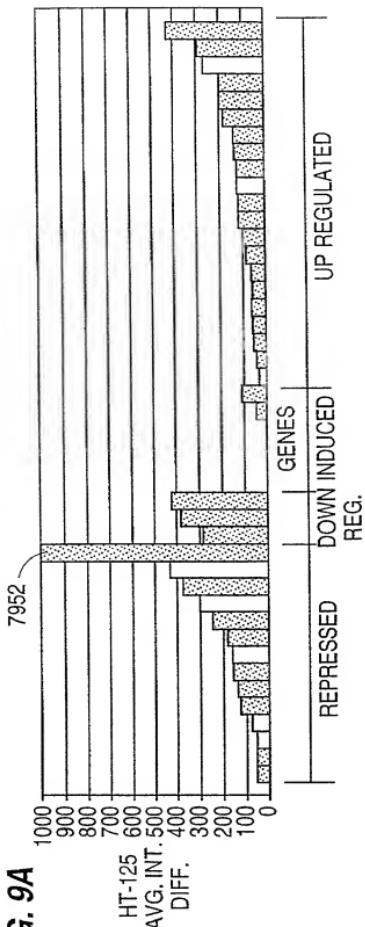
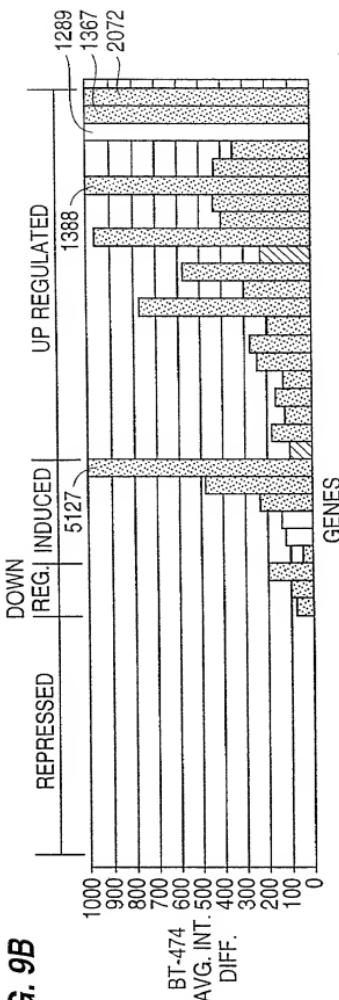
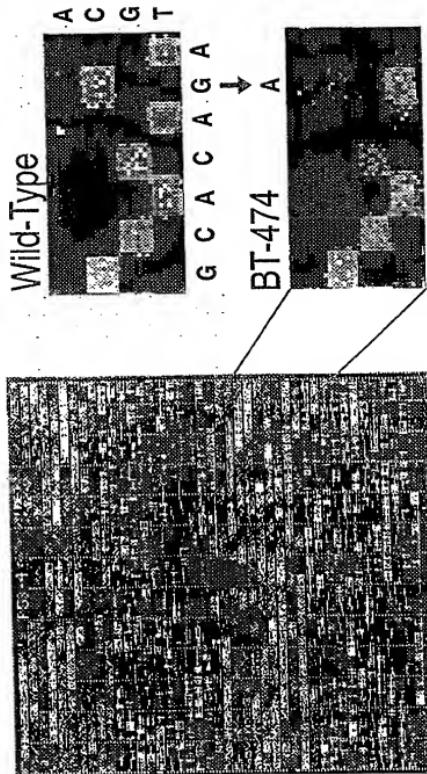


FIG. 9B

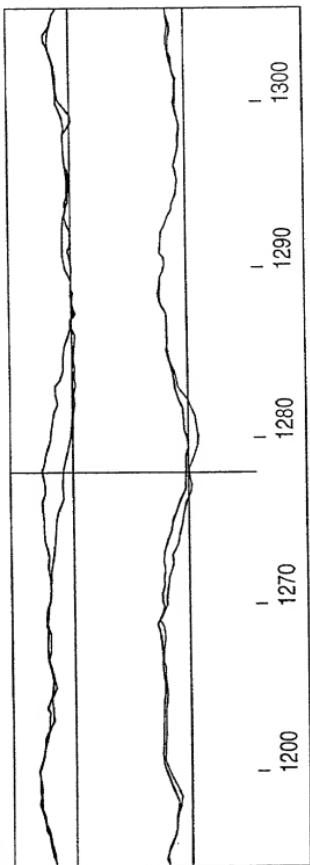


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FIG. 10A



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**FIG. 10B****FIG. 10C**

wild-type.seq	P G R D R R T E E E E E N L R K cctggagagaccggcgcacagaggaaatcccgaaaga
BT-474.seq	P G R D R R T E E E E N L R K cctggagagaccggcgcacaaaaggaaatcccgaaaga

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**FIG. 11A****Table 3.**

Genes transcriptionally induced in BT-474 vs HT-125

Accession	Nominal copy number: 500-1,000 copies/cell	Functional category
X00474	PS2 protein precursor	other
M1 1730	Her2/neu tyrosine kinase receptor	structural/cytoskeletal
R1 0066	cDNA clone 128808 similar to Prohibitin	signal transduction
J05068	Transcobalamin I	other
M22382	Mitochondrial matrix protein P1 precursor	mitochondrial
T54303	cDNA clone 69022 similar to Keratin, type II cytoskeletal 8	structural/cytoskeletal
L33930	CD24	signal transduction
T51499	cDNA clone 71494 similar to Succinate dehydrogenase	metabolic enz.
T70062	cDNA clone 80945 similar to NF45	transcription factor
X70940	Elongation factor 1 alpha-2	translational mach.
M88279	Human immunophilin	other
D45370	Adipose specific protein	other
H52207	cDNA clone 209710 similar to Matrix GLA-protein precursor	secr. gr. fact.
L08044	Intestinal trefoil factor	transcription factor
M31627	X Box binding protein-1	metabolic enz.
U37519	Aldehyde dehydrogenase	transcription factor
U39840	Hepatocyte nuclear factor-3 alpha	other
M26481	KS14 antigen	DNA replication
H09351	cDNA clone 46019 similar to MCM3 homolog	DNA replication
T51961	Proliferating cell nuclear antigen	other
T59162	cDNA clone 74635 similar to Selenium-binding protein	

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**FIG. 11B**

Nominal copy number: 50-100 cop/cell	cell ad./cell-cell comm.
cDNA clone 82030 similar to Clusterin precursor	metabolic enz.
Fructose-1,6-biphosphatase	cell ad./cell-cell comm.
E-cadherin	other
Nonspecific crossreacting antigen	other
M18216	translational mach.
U31875	other
Hept27 protein	other
L02547	other
Cleavage stim. factor	other
R89566	other
cDNA clone 195338 similar to lamin B receptor	other
T98835	other
cDNA clone 122341 similar to 80.7 KD alpha trans-inducing protein	other
R00451	other
cDNA clone 123283 similar to Clathrin coat assembly protein AP47	signal transduction
M34309	metabolic enz.
Human epidermal growth factor receptor, HER3	other
X73424	other
Propionyl-CoA carboxylase beta chain	mitochondrial
BCL7B	metabolic enz.
X89985	other
H00645	other
cDNA clone 149859 similar to Ribonuclease inhibitor	secr. gl. fact.
H41017	transcription factor
cDNA clone 193957 similar to Creatine kinase, ubiquitous mitochondrial precursor	translational mach.
R85558	
Nominal copy number: 10-50 copies/cell	
H41006	
cDNA clone 177323 similar to Quinol oxidase polypeptide I	
X51801	
OP-1, osteogenic protein	
M69238	
Aryl hydrocarbon receptor nuclear translocator	
X69392	
Ribosomal protein L26.	

**FIG. 11C**

R88418	cDNA clone 166353 similar to Cleavage stimulation factor, 50 KD subunit	translational mach.
Y00815	Leukocyte antigen related protein	cell ad./cell-cell comm.
H41406	cDNA clone 192943 similar to mouse Gamma-adaptin	protein process.
X92814	HREY107-like protein.	other
X68194		structural/cytoskeletal
R42070	cDNA clone 30646 similar to Verprolin	other
H19467	cDNA clone 172249 similar to Ankyrin R	signal transduction
R10620	cDNA clone 128901 similar to Tyrosine-protein kinase CSK	metabolic enz.
L29254	L-idio-2 dehydrogenase gene	other
M34458	Lamin B1	cell cycle
R53942	cDNA clone 40026 similar to ADP-ATP carrier protein, heartskeletal muscle isoform	other
T98666	cDNA clone 121357 similar to Cyclin-dependent kinase Interactor 1	signal transduction
R44663	cDNA clone 33477 similar to Phenylalkylamine binding protein	DNA replication
D43772	GRB-7	translational mach.
BM28		metabolic enz.
X67734	cDNA clone 113492 similar to Translational activator GCN1	transcription factor
T78506	KIAA0089 Human mRNA gene for Mouse glycerophosphate dehydrogenase-related	cell ad./cell-cell comm.
D42047		transcriptional mach.
X58072	hGATA3	other
M34344	Platelet glycoprotein IIb	cell ad./cell-cell comm.
R46731	cDNA clone 36517 similar to Transcriptional regulatory protein RPD3	transcription factor
U33819	Zinc-finger DNA binding protein	other
R23246	cDNA clone 131094 similar to Gollath protein	cell ad./cell-cell comm.
H64469	cDNA clone 2339846 similar to Leukocyte antigen CD3	other
T47377	cDNA clone 571035 similar to S-100P protein	

**FIG. 11D**

H05814	cDNA clone 44151 similar to Putative ATP-dependent RNA helicase	translational mach.
X33618	3-hydroxy-3-methylglutaryl coenzyme A synthase	metabolic enz.
U14550	Sialyltransferase STNm	metabolic enz.
R55185	cDNA clone 154654 similar to Galactoside 3(4)-L-fucosyltransferase	metabolic enz.
V00568	C-myc	transcription factor
L47738	Inducible protein	other
M20560	Lipocortin-III	other
T47964	cDNA clone 71549 similar to Purine nucleoside phosphorylase	metabolic enz.
T90192	cDNA clone 110564 similar to DNA-binding protein MEI-18	transcription factor
U20285	GP51	signal transduction
M81637	Grancalcin	other
H19201	cDNA clone 50873 similar to Guanine nucleotide diss. stim.	signal transduction
X03635	Oestrogen receptor	transcription factor
X52426	Cytokeratin 13	structural/cytoskeletal
R37799	cDNA clone 270833 similar to Protein phosphatase PP2A	signal transduction
X03484	Rai oncogene	signal transduction
L11284	ERK activator kinase, MEK1	signal transduction
X70683	SOX-4	transcription factor
R72644	cDNA clone 156489 3' similar to Choline kinase	other
M97370	Adenosine receptor (A <sub>2</sub> )	signal transduction
X76180	Lung amiloride sensitive Na <sup>+</sup> channel protein	cell ad./cell comm.
R45583	cDNA clone 35271 similar to NG-CAM related cell adhesion molecule	transcription factor
M13665	C-myc	other
D26018	Human mRNA (KIAA0039) for ORF	signal transduction
H54752	cDNA clone 203275 similar to Activator 1 37 KD subunit	other
H04239	cDNA clone 151776 similar to Developmental protein seven in absentia	signal transduction

**FIG. 11E**

D21852	Human mRNA (KIAA0029) for ORF	other
M57730	Immediate early response protein B61 precursor	secr. gr. fact.
M16778	Human T-cell receptor gamma chain V(J)-C-I-II region	other
X13956	12S RNA induced by poly(I), poly(C) and Newcastle disease virus	other
U07349	Human B lymphocyte serine/threonine protein kinase	signal transduction
D00726	Ferrochelatase	metabolic enz.
M54988	K-ras oncogene	signal transduction
D31661	ERK tyrosine kinase	signal transduction
U21108	Human dial specific protein phosphatase	signal transduction
X52228	Secreted epithelial tumour mucin antigen	other
X13425	Pancreatic carcinoma marker GA733-1	other
R52511	cDNA clone 39763 similar to Gamma-interferon-inducible protein IP-30 precursor	other
X83425	Lutheran blood group glycoprotein.	cell ad./cell-cell comm.
U13045	Human nuclear respiratory factor-2 subunit beta 1	transcription factor
M20132	Antigen receptor	transcription factor
L07615	Neuropeptide Y receptor Y1	transcription factor
M86699	Human kinase, TTK	transcription factor
R43936	cDNA clone 32974 similar to Serine/threonine-protein kinase STE20	transcription factor
X60787	Transcription factor ILF	transcription factor
X74570	Gal-beta(1-3)->4 GlcNAc alpha:2,3-sialyltransferase	translational mach.
U30255	Phosphogluconate dehydrogenase	mitochondrial
D11466	For Pig N-acetylglucosaminyl-phosphatidylinositol	cell-cycle
M64347	Novel growth factor receptor	other
R43064	cDNA clone 32719 similar to E2 protein	structural/cytoskeletal
M60724	p70 ribosomal S6 kinase alpha-1	translational mach.
U34074	A kinase anchor protein S-AKAP4	
H87205	cDNA clone 220505 similar to cell division protein kinase 5	
X57348	cDNA clone 9112 similar to H-sepiosins mRNA	
X07696	Keratin, type cytoskeletal 15	
X13482	U2 small nuclear ribonucleoprotein A'	

**FIG. 11F**

Nominal copy number: 1-10 copies/cell	
Human mRNA for ORF (KIAA0196)	other
Gamma-glutamylcysteine synthetase (GCS)	metabolic enz.
cDNA clone 148231 similar to Zinc finger autosomal protein H13822	other
Transcription factor TFIID subunit TAFI128 X83928	transcriptional mach.
cDNA clone 233691 similar to DNA polymerase beta H52655	DNA replication
Tyrosine kinase SEK receptor precursor R42095	signal transduction
Human mRNA for ORF (KIAA0098) D13633	other
Human ankyrin G U13616	other
SIL mRNA M74558	transcriptional mach.
Transcription factor TFIE alpha X63468	other
Amphiregulin M30704	metabolic enz.
Copper transporting ATPase U11700	metabolic enz.
cDNA clone 230127 similar to D-beta-hydroxybutyrate dehydrogenase precursor H78807	translational mach.
p80-collin M58411	signal transduction
Serine kinase, hAK65 U25975	signal transduction
cDNA clone 32410 similar to JNK activating kinase 1 R42898	signal transduction
Vitamin D3 receptor J03258	signal transduction

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**FIG. 11G**Accession

Genes transcriptionally repressed in BT-474 vs HT-125		Functional category
Nominal copy number: 500-1,000 copies/cell		cell ad./cell-cell comm.
CDNA clone 175539 similar to Galectin-1		protein process.
cDNA clone 70133 similar to Glia derived nexin precursor		other
Nominal copy number: 100-500 copies/cell		other
Placental calcium-binding protein		other
Clone H1_1006d similar to GFRP3		structural/cytoskeletal
cdDNA clone 118219 similar to Tropomyosin		structural/cytoskeletal
Smooth muscle protein 22-alpha		ECM
Collagenase type IV mRNA, 3' end.		cell ad./cell-cell comm.
Human lysyl oxidase		other
Interferon-inducible protein 1-8D		cell ad./cell-cell comm.
cdDNA clone 122884 similar to Follistatin precursor		ECM
Clone phiCA1 similar to Procollagen alpha 2(I)chain precursor		protein process.
cdDNA clone 78034 similar to Metalloproteinase inhibitor 3 precursor		secr. gl. fact.
Connective tissue growth factor		other
cdDNA clone 152637 similar to Coagulation factor V precursor		cell ad./cell-cell comm.
cdDNA clone 73802 similar to Sparc precursor or		cell ad./cell-cell comm.
Human decorin		protein process.
Cathepsin B		protein process.
cdDNA clone 252294 similar to Protein-lysine 6-oxidase precursor		structural/cytoskeletal
Moesin		other
RTVP-1		protein process.
cdDNA clone 120085 similar to Protease 30 precursor		structural/cytoskeletal
Collagen V alpha-2 C-terminal globular domain.		other
IGFPB6		metabolic enz.
Placental cDNA coding for 5' nucleotidase		structural/cytoskeletal
cdDNA clone 241122 similar to Tubulin beta chain		DNA replication
U21090		signal transduction
Z18951		

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**FIG. 11H**

Nominal copy number: 50-100 copies/cell	
Human mitogen-responsive phosphoprotein cDNA clone 209654 similar to Collagen alpha 3(V) chain	other structural/cytoskeletal cell ad./cell-cell comm. signal transduction
Thrombospondin cDNA clone 183508 similar to Peripheral myelin protein 22	cell ad./cell-cell comm. structural/cytoskeletal signal transduction
cDNA clone 186308 similar to Annexin I	cell ad./cell-cell comm. structural/cytoskeletal signal transduction
Alpha-2 type V collagen	structural/cytoskeletal signal transduction
Tropomyosin alpha chain, smooth muscle cDNA clone 690440 similar to RAS-related protein	protein process.
Cathepsin X cDNA clone 52096 similar to APDGFR precursor	signal transduction
cDNA clone 140763 similar to GAP junction alpha-1 protein	cell ad./cell-cell comm.
cDNA clone 155771 similar to Bone morphogenic protein 1 precursor Lumican	protein process. ECM

**FIG. 11**

M23419	Initiation factor 5A	translational mach.
L34056	Cadherin-11	signal transduction
M64110	Caldesmon	structural/cytoskeletal
XY72012	Endoglin	signal transduction
R70383	cDNA clone 155241 similar to Vitellogenin II precursor	other
T69425	cDNA clone 82963 similar to Alpha-2 macroglobulin precursor	protein process.
H02540	cDNA clone 151270 similar to Cathepsin L precursor	protein process.
X05232	Stromelysin	protein process.
T54278	cDNA clone 60198 similar to Tissue inhibitor of metalloproteinases II precursor	protein process.
M24486	Prolyl 4-hydroxylase alpha subunit	ECM
H80975	cDNA clone 240954 similar to Plasma protease C1 inhibitor precursor	protein process.
H05705	cDNA clone 44616 similar to RAS-related protein ORAB-1	signal transduction
M38210	Colony stimulating factor 1 receptor	signal transduction
T98364	cDNA clone 121066 similar to M phase inducer phosphatase 3	metabolic enz.

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**FIG. 11J**

Nominal copy number: 10-50 copies/cell	
Chondroitin sulfate proteoglycan core protein	cell ad./cell-cell comm.
Adrenomedullin	other
L35594	cell ad./cell-cell comm.
R23249	other
Fibrillin	ECM
CDNA clone 118372 similar to CD44 antigen, epithelial form precursor	signal transduction
T91563	other
Aldose reductase	ECM
J05017	other
(LAMB 2) gene Laminin B2 chain	ECM
M55210	other
Interferon-induced 17 KD protein	signal transduction
M13755	other
Caveolin-2	ECM
U32114	other
PSG9	protein process.
X52679	protein process.
Sphingomyelin phosphodiesterase	cell ad./cell-cell comm.
Membrane-type matrix metalloproteinase 1	other
Z48481	protein process.
Lysyl oxidase-like protein	cell ad./cell-cell comm.
U24389	other
Heparan sulfate proteoglycan	signal transduction
D29982	cell ad./cell-cell comm.
Placental protein 5	other
Y00711	cell ad./cell-cell comm.
R50499	other
U09278	cell ad./cell-cell comm.
Fibroblast activation protein	ECM
H16811	other
CDNA clone 156533 similar to Platelet membrane glycoprotein IIb precursor	protein process
X82494	cell cycle
H37925	cell ad./cell-cell comm.
J02685	other
Plasminogen activator inhibitor-2	cell ad./cell-cell comm.
U03106	other
Wild-type p53 activated fragment-1, p21WAF1/CIP1	ECM
D13665	other
Osteoblast specific factor 2	ECM
T55741	other
U18467	transcription factor.
X06700	protein process
Pro-alpha1 (III) collagen	cell ad./cell-cell comm.
H56627	transcriptilin factor.
CDNA clone 231424 similar to Glutathione S-transferase P	protein process.
T41199	other
CDNA clone 62528 similar to Laminin gamma-1 chain precursor	protein process.
T59895	other
T68426	cell ad./cell-cell comm.
X13810	transcriptilin factor.
OTF-2	protein process.
CDNA clone 70213 similar to Alpha-1-antiprotease F precursor	protein process.
T50086	

**FIG. 11K**

D28137	Human mRNA for BST-2	cell ad./cell-cell comm.
Z37976	Latent TGF-beta binding protein	other
X02492	Interferon-induced protein 6-16 precursor	other
T66960	cDNA clone 66508 3' similar to Nuclear factor 1 clone PNFI/X	other
H88938	Keratinocyte growth factor precursor	secr. gr. fact.
M29150	Interleukin 6	secr. gr. fact.
X05231	Collagenase	protein process.
X68148	KIAA0057 for ORF	signal transduction
D31762	cDNA clone 83635 similar to Endoglin precursor	cell-cycle
T61090	cDNA clone 78017 similar to Complement C1R component precursor	signal transduction
T53889	hR-PTFU gene for protein tyrosine phosphatase	other
X58288	cDNA clone 72466 similar to Alpha crystallin B chain	signal transduction
T51913	Hemopoietic proteoglycan core protein	other
X17042	N-acetylglucosaminyltransferase I	cell ad./cell-cell comm.
M55621	cDNA clone 220183 similar to EBNA-2 nuclear protein	protein process.
H85111	Pentaxin	transcription factor
X63613	Interferon-induced 56 kD protein	other
M24594	cDNA clone 136821 similar to Transforming growth factor beta 1 precursor	other
R35467	Transcriptional regulator ISGF3 gamma subunit	secr. gr. fact.
M87503	Tissue type plasminogen activator	transcription factor
X13097	Brain-derived neurotrophic factor	cell ad./cell-cell comm.
X60201	Human glutathione transferase M2	other
M63509	Alpha-1 type XVI collagen	other
M92642	MHC class I HLA-J	ECM
M80469		other

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**FIG. 11L**

T60855	cDNA clone 76721 similar to Calneurin B subunit Isoform 1	signal transduction
X16707	Fra-1	transcription factor
H54425	cDNA 203126 similar to Metallothionein-II	other
L04733	Kinesin light chain	structural/cytoskeletal
R46493	cDNA clone 36200 similar to Tissue factor precursor	ECM
M29696	Interleukin-7 receptor alpha chain precursor	signal transduction
T97948	cDNA clone 121916 similar to Calponin H2, smooth muscle	structural/cytoskeletal
R43953	cDNA clone 33191 similar to Oploid binding protein	cell ad./cell comm.
R16659	cDNA clone 126222 similar to Tissue factor pathway inhibitor	cell ad./cell comm.
U37019	Smooth muscle cell calponin	structural/cytoskeletal
M96322	Gravin	cell ad./cell comm.
T78824	cDNA clone 113518 similar to Carbonyl reductase	other
M60974	GADD45	cell-cycle
X60708	pCHDP7	protein process.
M62424	Thrombin receptor precursor	signal transduction
R94513	cDNA clone 197667 similar to STAT2	signal transduction
V00523	HLA-DP alpha	other
H65605	cDNA clone 209780 similar to Prothrombin precursor	signal transduction
X76488	Lyosomal acid lipase	protein process.
R12876	cDNA clone 125303 similar to Complement factor H-like protein 1 precursor	other
X06985	Heme oxygenase	metabolic enz.
R60908	cDNA clone 42188 similar to protein-tyrosine kinase	signal transduction
U25779	Human chromosome 17q21 mRNA clone 684:2	other
X12496	Erythrocyte membrane dialogycoprotein beta	other
T71207	cDNA clone 110162 similar to RAS-related C3 Botulinum toxin substrate 2	signal transduction

**FIG. 11M**

R52961	cDNA clone 40303 similar to Shc transforming protein 46.8 KD and 51.7 KD precursor signal transduction
M97676	Homeobox protein
R95874	cDNA clone 199264 similar to LTR5 Retrovirus-related ENV polyprotein
T86469	cDNA 114641 similar to Collagen alpha 3(VI) chain
R48243	cDNA clone 153769 similar to RAS-related protein RHA1
U19969	Two-handed zinc finger protein ZEB
Nominal copy number: 1-10 copies/cell	
R99935	cDNA clone 201757 similar to DNA-directed RNA pol I largest subunit
T64142	cDNA clone 30145 similar to Phorbolipid protein PPA1
H74007	cDNA clone 232946 similar to Serine/threonine-protein kinase SGK
H47650	PTS system, sucrose-spec. IIABC component
J04080	Complement component C1r
D90226	OSF-1
X03348	Human mRNA for beta-glucocorticoid receptor
R32804	cDNA clone 135146 similar to Glucose transporter type 3
M60618	Nuclear autoantigen SP-100
L13463	Human helix-loop-helix basic phosphoprotein
M26683	Human interferon gamma treatment inducible mRNA.
M63688	Interferon-gamma induced protein
X73608	Testican
M68338	Serum protein MSE55
T52698	cDNA clone 67233 similar to Protein-tyrosine phosphatase 1B
U16307	Glioma pathogenesis-related protein
R35976	cDNA clone 137079 similar to CD30 ligand
X16665	HOX2H
R42244	cDNA clone 30543 similar to Antigen peptide transporter 1
U19718	Human microtubule-associated glycoprotein
T85165	cDNA clone 111345 similar to SRC substrate P80/85 proteins
R45687	Cyclin G
L22473	Bax

Message quantities are expressed as nominal copy number per cell relative to hybridization intensities of known copy number spiked controls.

Abbreviations: secr. gr. fact., secreted growth factor; ad, adhesion; comm., communication; mach., machinery; enz., enzyme; pross., processing; ECM, extracellular matrix.